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09/858,354	05/15/2001	Daniel H. McCabe	PA1786US	1789

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EXAMINER

WANG, JIN CHENG

ART UNIT	PAPER NUMBER
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2672

9

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

9/16

Office Action Summary	Application No.	Applicant(s)	
	09/858,354	MCCABE, DANIEL H.	
	Examiner Jin-Cheng Wang	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-26 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 7/15/2003 has been entered. Claims 12, 14, 20, 22, and 26 have been amended.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Larson U.S. Pat. No. 6,359,623 (hereinafter Larson).

4. Claim 1:

Larson teaches a system for identifying pixels inside a graphics primitive of a raster image (figures 1-2) comprising:

A memory for storing a raster image (column 5, lines 58-67, column 6, lines 1-47; column 7, lines 1-140);

A graphics engine (figures 2 and 3, column 5, lines 40-57) coupled to the memory (column 6, lines 33-43) and including a pipeline structure (column 3, lines 38-67, column 4, lines 1-18, column 6, lines 8-27), the pipeline structure receiving information related to polygonal portions of the raster image from the memory (column 6, lines 8-54) and information related to

graphics primitives from a source for determining whether a polygonal portion of the raster image is at least partly inside the graphics primitive (column 3, lines 5-67, column 4, lines 1-30; column 5, lines 58-67, column 6, lines 1-47; column 7, lines 1-140).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of a predetermined number of sequential logic circuits and a predetermined number of parallel logic circuits. However, Larson further discloses the claimed limitation of a predetermined number of sequential logic circuits and a predetermined number of parallel logic circuits (column 3, lines 17-37).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of the pipeline structure dividing the polygonal portion into a predetermined number of polygonal sub-portions if the polygonal portion is at least partly inside the graphics primitive. However, Larson further discloses the claimed limitation of the pipeline structure dividing the polygonal portion into a predetermined number of polygonal sub-portions if the polygonal portion is at least partly inside the graphics primitive (figure 4, column 11, lines 1-15)

Claim 4:

The claim 4 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of the pipeline structure determining whether the polygonal portion of the raster image is at least partly inside the graphics primitive by evaluation of edge function of the

graphics primitive. However, Larson further discloses the claimed limitation of the pipeline structure determining whether the polygonal portion of the raster image is at least partly inside the graphics primitive by evaluation of edge function of the graphics primitive (column 12, lines 16-67, column 13, lines 1-51).

Claim 5:

The claim 5 encompasses the same scope of invention as that of claim 4 except additional claimed limitation of each edge function of the graphics primitive being based on a general edge function, $e(x,y) = e_0 + Nx X + Ny Y$. However, Larson further discloses the claimed limitation of each edge function of the graphics primitive being based on a general edge function, $e(x,y) = e_0 + Nx X + Ny Y$ (column 12, lines 16-67, column 13, lines 1-51).

Claim 6:

The claim 6 encompasses the same scope of invention as that of claim 4 except additional claimed limitation of the edge function being evaluated at a corner vertex of the polygonal portion, the corner vertex being farthest in a positive direction from a primitive edge associated with the edge function. However, Larson further discloses the claimed limitation of the edge function being evaluated at a corner vertex of the polygonal portion, the corner vertex being farthest in a positive direction from a primitive edge associated with the edge function (column 12, lines 16-67, column 13, lines 1-51).

Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 2 except additional claimed limitation of the pipeline structure being configured such that the sequential logic circuits are coupled together in series followed by the parallel logic circuits coupled together in parallel.

However, Larson further discloses the claimed limitation of the pipeline structure being configured such that the sequential logic circuits are coupled together in series followed by the parallel logic circuits coupled together in parallel (e.g., column 5, lines 23-67, column 6, lines 1-4, column 9, lines 4-8).

Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 2 except additional claimed limitation of the pipeline structure comprising seven sequential logic circuits connect in series and seven parallel logic circuits coupled together in a multi-stage pyramid structure. However, Holtz further discloses the claimed limitation of the pipeline structure comprising seven sequential logic circuits connect in series and seven parallel logic circuits coupled together in a multi-stage pyramid structure (e.g., column 5, lines 23-67, column 6, lines 1-4, column 9, lines 4-8).

Claim 9:

The claim 9 encompasses the same scope of invention as that of claim 3 except additional claimed limitation of the pipeline structure determining the two polygonal sub-portions by determining midpoint values of two opposite sides of the polygonal portion of the raster image and using the midpoint values as vertices of the two polygonal sub-portions. However, Larson further discloses the claimed limitation of the pipeline structure determining the two polygonal sub-portions by determining midpoint values of two opposite sides of the polygonal portion of the

raster image and using the midpoint values as vertices of the two polygonal sub-portions (figure 4, column 12, lines 16-67, column 13, lines 1-51).

Claim 10:

The claim 10 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of the pipeline structure further comprising a predetermined number of pixel engines for determining attribute values associated with each pixel. However, Larson further discloses the claimed limitation of the pipeline structure further comprising a predetermined number of pixel engines for determining attribute values associated with each pixel (column6, lines 28-54).

Claim 11:

The claim 11 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of the polygonal portion of a raster image having a width and a height, each of the width and the height having a value of a power of 2^m . However, Larson further discloses the claimed limitation of the polygonal portion of a raster image having a width and a height, each of the width and the height having a value of a power of 2^m (figure 4, column 11, lines 1-67, column 12, lines 1-3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12-26 are rejected under 35 U.S.C. 103(a) as being as being unpatentable over Larson U.S. Pat. No. 6,359,623 (hereinafter Larson), in view of Greene et al. U.S. Patent No. 6,480,205 (hereafter Greene).

7. Claim 12:

(1) Larson teaches a method for identifying pixels inside a graphics primitive of a raster image (see the abstract, figures 6-10) comprising the steps of:

(a) Determining whether a polygonal portion of the raster image is at least partly inside the graphics primitive using a coordinate reference frame located at a point of the polygonal portion (e.g., column 3, lines 5-67; column 4, lines 1-17);

(b) Dividing the polygonal portion of the raster image into a predetermined number of polygonal subportions if the polygonal portion of the raster image is at least partly inside the graphics primitive (column 11, lines 1-16);

(c) Determining whether each polygonal sub-portion of the raster image is at least partly inside the graphic primitive (column 11, lines 1-16);

(d) Further dividing the polygonal sub-portion into a predetermined number of polygonal sub-portions if the polygonal sub-portion is at least partly inside the graphics primitive and is larger than a pixel (figure 4, column 11, lines 1-16).

(2) However, it is not clear whether Larson implicitly teaches using a coordinate reference frame located at the reference point (x^*, y^*) of figure 11 which must necessarily be the same as the geometric center (point) of a region or a tile or a portion or an area corresponding to the portion of the claimed invention.

(3) Greene teaches implicitly a reference frame located at a geometric center of the tile (See Figure 2 of Greene wherein one of the reference frame points can be chosen to center on the tile of Figure 2).

(4) It would have been obvious to one of ordinary skill in the art to have incorporated the Greene's selection of the reference frame centering on the geometric center of the tile into Larson's method for determining whether the corners of the regions are within, outside, or fully inside a graphical primitive because Larson suggests selecting a reference frame (figure 11) with a reference point that may be the geometric center of the regions (Larson column 11, lines 1-15) and therefore the claimed limitation suggests an obvious modification of Larson.

(5) One having the ordinary skill in the art would have been motivated to do this because it would have provided a reference frame that permits the equations to be evaluated with shifts and adds (Greene column 21, lines 59-67; column 22, lines 1-45).

Claim 13:

The claim 13 encompasses the same scope of invention as that of claim 12 except additional claimed limitation of recursively performing (c) and (d) until no more polygonal sub-portions that are at least partly inside the graphics primitive. However, Larson further discloses the claimed limitation of recursively performing (c) and (d) until no more polygonal sub-portions that are at least partly inside the graphics primitive (figure 4, column 11, lines 1-16).

Claim 14:

The claim 14 encompasses the same scope of invention as that of claim 12 except additional claimed limitation that determining step (a) further comprises the step of receiving a

plurality of values for corner vertices of the polygonal portion and arithmetic edge functions related to the graphic primitive having a coordinate reference frame located at a geometric center of the polygonal portion, the arithmetic edge function corresponding to an edge of the graphics primitive. However, Larson further discloses the claimed limitation of that determining step (a) further comprises the step of receiving a plurality of values for corner vertices of the polygonal portion and arithmetic edge functions related to the graphic primitive having a coordinate reference frame located at a geometric center of the polygonal portion, the arithmetic edge function corresponding to an edge of the graphics primitive (figure 4, column 11, lines 1-67, column 12, lines 1-67, column 13, lines 1-51).

Claim 15:

The claim 15 encompasses the same scope of invention as that of claim 14 except additional claimed limitation that the determining step (a) further comprises the step of evaluating an arithmetic edge function received at a corner vertex of the polygonal portion, the corner vertex being farthest in a positive direction relative to the corresponding edge of the graphics primitive.

However, Larson further discloses the claimed limitation of that the determining step (a) further comprises the step of evaluating an arithmetic edge function received at a corner vertex of the polygonal portion, the corner vertex being farthest in a positive direction relative to the corresponding edge of the graphics primitive (figure 4, column 11, lines 1-67, column 12, lines 1-67, column 13, lines 1-51).

Claim 16:

The claim 16 encompasses the same scope of invention as that of claim 15 except additional claimed limitation of the polygonal portion being at least partly inside the graphics primitive if all arithmetic edge functions evaluated being positive. However, Larson further discloses the claimed limitation of the polygonal portion being at least partly inside the graphics primitive if all arithmetic edge functions evaluated being positive (figure 4, column 11, lines 1-67, column 12, lines 1-67, column 13, lines 1-51).

Claim 17:

The claim 17 encompasses the same scope of invention as that of claim 12 except additional claimed limitation that the dividing step (b) further comprises the step of dividing the polygonal portion into two polygonal sub-portions by determining midpoint values of two opposite sides of the polygonal portion. However, Larson further discloses the claimed limitation that the dividing step (b) further comprises the step of dividing the polygonal portion into two polygonal sub-portions by determining midpoint values of two opposite sides of the polygonal portion (figure 4, column 11, lines 1-67, column 12, lines 1-67, column 13, lines 1-51).

Claim 18:

The claim 18 encompasses the same scope of invention as that of claim 12 except additional claimed limitation that the dividing step (b) further comprises the step of sequentially deriving two new sets of arithmetic edge functions associated with a translated coordinate reference frame located at a geometric center of a corresponding one of the polygonal sub-portions. However, Larson further discloses the claimed limitation that the dividing step (b) further comprises the step of sequentially deriving two new sets of arithmetic edge functions associated with a translated coordinate reference frame located at a geometric center of a

corresponding one of the polygonal sub-portions (figure 4, column 11, lines 1-67, column 12, lines 1-67, column 13, lines 1-51).

Claim 20:

The claim 20 encompasses the same scope of invention as that of claim 12 except additional claimed limitation of an electronic readable medium having embodied thereon a program. However, Larson further discloses the claimed limitation of an electronic readable medium having embodied thereon a program (e.g., figure 9, column 9, lines 62-67, column 10, lines 1-6, column 17, lines 1-9).

Claim 21:

The claim 21 encompasses the same scope of invention as that of claim 20 except additional claimed limitation of recursively performing (c) and (d) until no more polygonal sub-portions that are at least partly inside the graphics primitive. However, Larson further discloses the claimed limitation of recursively performing (c) and (d) until no more polygonal sub-portions that are at least partly inside the graphics primitive (figure 4, column 11, lines 1-16).

8. Claim 22:

(1) Larson teaches a method of identifying pixels inside a graphics primitive of a raster image (see the abstract, figures 6-10) comprising the steps of:

- (a) Selecting a tile including a pixel (column 10, lines 42-54);
- (b) Determining if a portion of the tile is within the graphics primitive (column 10, lines 55-67, column 11, lines 1-16);

(c) Dividing the tile into sub-tiles if a portion of the tile is within the graphics primitive (column 11, lines 1-16);

(d) Recursively dividing each sub-tile having a portion within the graphics primitive until the sub-tile is equal in size to a pixel (figure 4, column 11, lines 1-16).

(2) However, it is not clear whether Larson implicitly teaches the claimed limitation of defining a coordinate reference frame located at a geometric center of the tile.

(3) Greene teaches implicitly a reference frame located at a geometric center of the tile (See Figure 2 of Greene wherein one of the reference frame points can be chosen to center on the tile of Figure 2).

(4) It would have been obvious to one of ordinary skill in the art to have incorporated the Greene's selection of the reference frame centering on the geometric center of the tile into Larson's method for determining whether the corners of the regions are within, outside, or fully inside a graphical primitive because Larson suggests selecting a reference frame (figure 11) with a reference point that may be the geometric center of the regions (Larson column 11, lines 1-15) and therefore the claimed limitation suggests an obvious modification of Larson.

(5) One having the ordinary skill in the art would have been motivated to do this because it would have provided a reference frame that permits the equations to be evaluated with shifts and adds (Greene column 21, lines 59-67; column 22, lines 1-45).

Claim 23:

The claim 23 encompasses the same scope of invention as that of claim 22 except additional claimed limitation of the step of disregarding the tile or sub-tile from subsequent

decomposition if the tile or sub-tile being outside of the graphics primitive. However, Larson further discloses the claimed limitation of the step of disregarding the tile or sub-tile from subsequent decomposition if the tile or sub-tile being outside of the graphics primitive (column 10, lines 55-67).

Claim 24:

The claim 24 encompasses the same scope of invention as that of claim 22 except additional claimed limitation that the step of determining further comprises evaluating the tile at a corner vertex which is farthest in a positive direction relative to a current edge of the graphics primitive. However, Larson further discloses the claimed limitation that the step of determining further comprises evaluating the tile at a corner vertex which is farthest in a positive direction relative to a current edge of the graphics primitive (column 10, lines 55-67).

Claim 25:

The claim 25 encompasses the same scope of invention as that of claim 22 except additional claimed limitation that the step of recursively dividing further comprises determining if the sub-tile is at least partly within the graphics primitive by evaluating the sub-tile at a corner vertex which is farthest in a positive direction relative to a current edge of the graphics primitive. However, Larson further discloses the claimed limitation that the step of recursively dividing further comprises determining if the sub-tile is at least partly within the graphics primitive by evaluating the sub-tile at a corner vertex which is farthest in a positive direction relative to a current edge of the graphics primitive (column 10, lines 55-67).

9. Claim 26:

The claim 26 encompasses the same scope of invention as that of claim 22 except additional claimed limitation of an electronic readable medium having embodied thereon a program. However, Larson further discloses the claimed limitation of an electronic readable medium having embodied thereon a program (e.g., figure 9, column 9, lines 62-67, column 10, lines 1-6, column 17, lines 1-9).

Remarks

10. Applicant's arguments, filed 07/15/2003, paper number 8, have been fully considered but they are not deemed to be persuasive.

11. Applicant argues in essence with respect to claim 1 and similar claims that:

"Applicant respectfully submits that Larson does not disclose, teach, or suggest a graphics engine including a pipeline structure, based at least upon the fact that Larson does not disclose a system or method in which subdivisions are carried out in parallel, or in which any processes are carried out in parallel."

This is not found persuasive because Larson teaches a graphics engine (e.g., graphics system 20 of figure 1) including a pipeline structure (column 5, lines 5-15; column 6, lines 9-30; column 7, lines 10-40). Applicant further argues that Larson does not disclose a system or method in which subdivisions are carried out in parallel, or in which any processes are carried out in parallel. In response, the examiner notes that the parallel architecture is not present in the independent claim 1 because the claim limitation only recites a pipeline structure. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Applicant argues in essence that:

“Applicant submits that although Larson states, col. 6, lines 19-20, ‘polygons are being processed through the graphics pipeline,’ Larson’s ‘graphics pipeline’ is not a ‘pipeline structure,’ as claimed in the present invention. A ‘pipeline structure’ of the present invention refers to a particular architectural design of the graphics engine to accommodate parallel processing.”

This is not found persuasive because Larson teaches a graphics engine (e.g., graphics system 20 of figure 1) including a pipeline structure (column 5, lines 5-15; column 6, lines 9-30; column 7, lines 10-40). Applicant argues that Larson’s graphics pipeline is not a pipeline structure as claimed in the present invention. In response, the examiner asserts that Larson’s graphics pipeline is a pipeline structure that meets the limitation of “a pipeline structure” as recited in claim 1. Applicant further argues that a pipeline structure of the present invention refers to a particular architectural design of the graphics engine to accommodate parallel processing. In response, the examiner notes that the parallel architecture is not present in the independent claim 1 because the claim limitation only recites a pipeline structure. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, the claim limitation “a pipeline structure” in the claim 1 does not render the limitation distinct from Larson’s graphics pipeline nor does it render the claim 1 allowable.

13. Applicant argues in essence with respect to claim 1 and similar claims that:

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“Larson does not disclose ‘a memory for storing a raster image,’ a memory for storing ‘information related to polygonal portions of the raster image,’ or a ‘pipeline structure receiving information...from the memory,’ as claimed in claim 1.”

This is not found persuasive because Larson teaches a memory for storing a raster image (see column 5, lines 40-67; column 6, lines 1-45). Larson also teaches a memory for storing information related to polygonal portions of the raster image and a pipeline structure receiving information from the memory (see for example, column 6, lines 55-67; column 7, lines 1-40). Therefore, Larson fulfills the claim 1 as currently drafted.

14. Applicant argues in essence that:

“Larson does not teach or disclose a hierarchical tiler that processes information in parallel.”

This is not found persuasive because Larson teaches a pyramid as polygons are being processed through the pipeline of the graphics system 20 (see column 7, lines 10-40) wherein the hierarchical tiler comprises logic configured to convert a primitive into pixel locations in screen space. The examiner asserts that the hierarchical tiler meets the claim limitation of parallel logic circuits because it is configured to update pyramid represented by FIG. 4A-4C comprising a plurality of regions and sub-regions that need to be updated by hierarchical logic circuit (i.e., hierarchical tiler) and to process a plurality of pixel locations in screen space that need to be processed by the hierarchical logic circuit (i.e., hierarchical tiler). The parallel logic circuit is inherently embedded within the hierarchical tiler.

15. Applicant argues in essence with respect to claim 12 and similar claims that:

“Applicant respectfully submits that the Examiner has not shown, nor has Larson disclosed, a method of determining whether a polygonal portion of a raster image is at least partly inside a graphics primitive, in which a coordinate reference frame is located at a geometric center of the polygonal portion, as claimed.”

This is not found persuasive because the examiner asserts that Larson teaches a method of determining whether a polygonal portion of a raster image is at least partly inside a graphics primitive, in which a coordinate reference frame is located at a point of the polygonal portion (see for example column 12, lines 54-67; column 13, lines 1-65). Greene further teaches that the reference frame can be selected at the geometric center of the polygonal portion. Therefore, Larson/Greene fulfills the claimed limitation set forth in claim 12 and similar claims.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 395-3900.

jcw
August 12, 2003



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600